

Water Supply

The supply of water from the Bay-Delta is insufficient to meet the beneficial uses dependent on the Bay-Delta system. As total demand for water from the system has continued to increase over the years, water supply reductions have become larger and more frequent and water supply reliability has decreased for most water users. The major problems can be categorized as follows:

- A. **Bay-Delta system water supply quantities and timing** do not meet short- and long-term expected demands. This problem applies to four use areas which depend on adequate water supply:
1. **In-Delta water supply** quantities and timing do not meet short- and long-term expected demands for the following four water users:
 - a) Water supply quantities and timing do not meet short- and long-term expected (existing and future) **agricultural water demands**.
 - b) Water supply quantities and timing do not meet short- and long-term expected (existing and future) **urban water demands**.
 - c) Water supply quantities and timing do not meet short- and long-term expected **environmental water demands** (see Ecosystem Quality section).
 - d) **Recreation water needs** (see Water Quality section).
 2. **Export water supply** quantities and timing do not meet short- and long-term expected demands for the following three water users:
 - a) Export water supply quantities and timing do not meet short- and long-term (existing and future) expected **agricultural demands**.
 - b) Export water supply quantities and timing do not meet short- and long-term (existing and future) expected **urban demands**.
 - c) Export water supply quantities and timing do not meet short- and long-term (existing and future) expected **ecosystem demands**.
 3. Available water does not meet short- and long-term expected needs for **Delta outflow**; (see Ecosystem Quality and Water Quality sections).
 - a) Delta outflow to **repel salinity intrusion** is inadequate at times.
 - b) Delta outflow to provide **migratory cues** for anadromous fish is inadequate at times.
 - c) Delta outflow to provide adequate conditions for in-Delta species is inadequate at times.
 4. **Opportunities for transferring water across the Delta** are limited for the following three water users:
 - a) Delta constraints severely limit ability to transfer water from north of the Delta to **agricultural water users** south of the Delta.
 - b) Delta constraints severely limit ability to transfer water from north of the Delta to **urban water users** South of the Delta.

- c) Delta constraints severely limit ability to transfer water from north of the Delta to **ecosystem** water users south of the Delta.
- B. **Bay-Delta system water supplies are uncertain** with respect to short- and long-term demands as shown below:
 - 1. The **amount and timing of water** available from the Bay-Delta system from season to season and from year to year is **unreliable**. This problem is somewhat different for different time periods:
 - a) The amount and timing of water available from the Delta during **drought periods** is unreliable for the following three water users:
 - a.1) **Agricultural water** users are subjected to deep water shortages during drought periods affecting economic viability.
 - a.2) Unreliability of water available from the Bay-Delta system during drought periods to **urban water** users provides increased risk for public health and safety needs.
 - a.3) Unreliability of water available from the Bay-Delta system during drought periods to **environmental water** users creates stress and reduced production of critical fish and wildlife benefits; (see Ecosystem Quality section).
 - b) The amount and timing of water available from the Bay-Delta system during **average periods** is unreliable for the following three water uses:
 - b.1) **Agricultural water** users are subjected to water shortages during average periods affecting economic viability.
 - b.2) Unreliability of water available from the Bay-Delta system during average periods to **urban water** users provides increased risk for public health and safety needs.
 - b.3) Unreliability of water available from the Bay-Delta system during average periods to **environmental water** users creates stress and reduced production of critical fish and wildlife benefits; (see Ecosystem Quality section).
 - c) The water supply in and from the Bay-Delta system is unreliable due to the **vulnerability of the levees** that protect it (see Vulnerability of Delta Functions Section).
 - 2. The amount of water available from the Bay-Delta system from season to season and from year to year **cannot be predicted** with expected certainty.
 - a) The amount of water available from the Bay-Delta system over the **short-term** cannot be predicted with any certainty for the following three water users:
 - a.1) **Agricultural water** users cannot plan and manage for efficient water use due to the unpredictability of the water supply available in the coming season.

- a.2) **Urban water** users cannot plan and manage for efficient water use due to the unpredictability of the water supply available in the coming season.
- a.3) **Environmental water** users cannot plan and manage for efficient water use due to the unpredictability of the water supply available in the coming season; (see Ecosystem Quality section)
- b) The amount of water available from the Bay-Delta system over the **long-term** cannot be predicted with any certainty for the following three water users:
 - b.1) Long-term regional planning for **agricultural water** supply cannot be conducted with any certainty due to the unpredictability of available Bay-Delta system water supply.
 - b.2) Long-term regional planning for **urban water** supply cannot be conducted with any certainty due to the unpredictability of available Bay-Delta system water supply.
 - b.3) Long-term regional planning for **environmental water** supply cannot be conducted with any certainty due to the unpredictability of available Bay-Delta system water supply; (see Ecosystem Quality section)